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EXAMINER	
MOORE, IAN N	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/832,251	LEE ET AL.
	Examiner	Art Unit
	Ian N Moore	2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2 and 9-15 is/are rejected.

7)☒ Claim(s) 3-8,16 and 17 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7/20/01.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: on page 1, first paragraph (with section title "To whom it may concerned") should be deleted, and according to 37 CFR 1.77(b) the title of the invention should be the first section in the specification. Appropriate correction is required.

Claim Objections

3. Claims 1, 4-7, 15 and 17 are objected to because of the following informalities. Appropriate correction is required.

   Claim 1 recites, "RCL-PDU" in line 4. For clarity, it is suggested to change RLC-PDU.

Claim 15 is objected for the same reason as stated above.

Claim 1 recites, "...**hereinafter, referred to as a**..." in line 4, 5, 7. For clarity, it is suggested to remove "hereinafter, referred to as a" before the acronym.

Claims 5,15, and 17 are objected for the same reason as stated above.

Claim 4 recites, "CRLC-HARQ-IND" in line 4. It is suggested to describe the acronym when reciting for the first time in the claim; for example, C...R...L...C...-HQRQ-Identification (CRLC-HARQ-IND).

Claim 6 is objected for the same reason as stated above.

Claim 7 recites, "CPHY-HARQ-REQ" in line 3. It is suggested to describe the acronym when reciting for the first time in the claim.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1 and 15 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 and 18 of U.S. Patent application No. 09/832,249. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 and 15 of the instant application merely broadens the scope of the claim 1 and 18 of the Patent application by eliminating the elements and their functions of the claims. It has been held that the omission an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA). Also note *Ex parte Rainu*, 168 USPQ 375 (Bd.App.1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 1 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), under the "description of the prior art" section of the specification, in view of Rathonyi (U.S. 6,359,877).

Regarding claim 1 and 15, APA discloses a data processing method for the hybrid ARQ type II/III on a uplink of a wide-band radio communication system (see

FIG. 2, UTRAN utilizing a Hybrid ARQ type II and III, see APA paragraph 18; see FIG. 3, for Uplink, from MS to RNS), comprising the steps of:

a) generating a radio link control-protocol data unit (hereinafter, referred to as a RCL-PDU) (see FIG. 3, RLC layer encapsulates the user data from upper layer as RLC-PDU in UMTS) used for a re-transmitted data with a changeable coding rate (paragraph 31 and 35; a retransmitted data) in a radio link control (hereinafter, referred to as a RLC) layer (see FIG. 3, RLC), and a protocol data unit which includes information from the RLC-PDU (hereinafter, referred to as a HARQ-RLC-Control-PDU) (paragraph 31-35; note that retransmission data consists the information from RLC and its corresponding upper layer user data);

b) transmitting the RLC-PDU and the HARQ-RLC-Control-PDU (see FIG. 3, a data frame which consists of a retransmitted information data from RLC layer and the RLC-PDU) to a medium access control dedicated (hereinafter, referred to as a MAC-D) (see FIG. 3, MAC of the MS is dedicated entity; paragraph 8) treating a general user part in a medium access control (hereinafter, referred to as a MAC) layer through a logical channel (see FIG. 1, note that an encapsulated frame which consists of combined retransmission information data and RLC-PDU is transmitted to UMTS MAC-dedicated layer for processing the user data part via the channel);

c) transforming the RLC-PDU and the HARQ-RLC-Control-PDU received from the receiver RLC layer to MAC-PDU and HARQ-MAC-Control-PDU (see FIG. 3, note that MAC-D layer encapsulates the combined RLC-PDU and retransmitting information data with MAC-D header, thereby, generating MAC encapsulated frame) and transmitting the transformed MAC-PDU and the HARQ-MAC-Control-PDU to a

physical layer (see FIG. 3, air link layer of the MS) through a transport channel (see FIG. 3, MAC encapsulated frame is transmits to the UMTS physical layer through UMTS the transport channel); and

d) transforming the MAC-PDU and the HARQ-MAC-Control-PDU received from the MAC-D to a radio transmission form (see FIG. 3, MAC encapsulated combined RLC-PDU and retransmitting information data is converted into a radio frame for air/radio transmission) and then transmitting them to a receiver (see FIG. 3, RNS) through the physical layer (see FIG. 3, air link layer of RNS; note that MAC encapsulated combined data PDU is transformed into a radio frame for the air/radio transmission).

APA does not explicitly disclose combining pre-transmitted data.

However, the above-mentioned claimed limitations are taught by Rathonyi'877. In particular, Rathonyi'877 teaches a) generating a radio link control-protocol data unit (RCL-PDU) (see col. 5, lines 49 to col. 6, lines 26; see FIG. 5B, third frame) used for combining pre-transmitted data (see FIG. 5b; a frame with NS sequence number 8) and a re-transmitted data with a changeable coding rate (see FIG. 5b, negative acknowledgment for requesting a PDU with sequence number 2 with different/changeable coding rate 4R (note that sequence number 2 PDU is transmitted with rate 2R previously); note that the third frame is the combination of packet/PDU assigned with sequence number 8 and retransmission request control information for packet/PDU with sequence number 2), and a protocol data unit which includes information from the RLC-PDU (HARQ-RLC-Control-PDU) (see FIG. 5B, NAK2,

note that retransmission request/NAK PDU consists information regarding the RLC-PDU sequence number; see col. 15, lines 1-40).

In view of this, having the system of APA and then given the teaching of Rathonyi'877, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of APA, by providing the transmitting the combined frame with a retransmission request data and the new data packet/PDU, as taught by Rathonyi'877. The motivation to combine is to obtain the advantages/benefits taught by Rathonyi'877 since Rathonyi'877 states at col. 58-65, see col. 6, lines 25-64 that such modification would maximize the use of resources and reduce overhead in packet re-transmission.

Regarding claims 13 and 14, APA discloses the transmitter is a user equipment (UE) (see FIG. 1, MS 100), and wherein the receiver is part of an asynchronous radio network (see FIG. 1, network 200).

6. Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Rathonyi'877, as applied to claim 1 above, and further in view of Kniseley (U.S. 6,317,430).

Regarding claim 2, the combined system of APA and Rathonyi'877 discloses all aspects of the claimed invention set forth in the rejection of Claim(s) x as described above, and Rathonyi'877 further teaches wherein the HARQ-RLC-Control-PDU includes a sequence number of the RLC-PDU (see FIG. 5b, sequence number 2 of the erroneous PDU/packet).

Neither APA nor Rathonyi'877 explicitly discloses a version number of the PDU and data identifying information to identify the PDU.

However, the above-mentioned claimed limitations are taught by Kniseley'877. In particular, Kniseley'877 teaches wherein the HARQ-RLC-Control-PDU (see FIG. 6, NAK message) includes a sequence number (see FIG. 6, sequence number) and a version number of the PDU (see FIG. 6, DEPTH/WIDTH/C; a value from most recently communicated value of the packet/PDU) and data identifying information to identify the PDU (see FIG. 6, a combined system of sequence number, BITMAP_SIZE, NAK_BITS provides the identification regarding the packet/PDU; see col. 5, line 26 to col. 6, lines 65).

In view of this, having the combined system of APA and Rathonyi'877, then given the teaching of Kniseley'877, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of APA and Rathonyi'877, by providing an identification information regarding the PDU in NAK message, as taught by Kniseley'877. The motivation to combine is to obtain the advantages/benefits taught by Kniseley'877 since Kniseley'877 states at col. 2, line x19-51 that such modification would permit the transmission of variable size PDUs with the identification scheme such as sequence numbering scheme that optimizes the protocol balance between header overhead and outstanding window size.

7. Claim 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Rathonyi'877, as applied to claim 1 above, and further in view of Hwang (U.S. 6,791,963).

Regarding claim 9, the combined system of APA and Rathonyi'877 wherein the logical channel for transmitting the RLC-PDU and the HARQ-RLC-Control-PDU as described above in claim 1.

Neither APA nor Rathonyi'877 explicitly discloses a dedicated traffic channel (DTCH).

However, the above-mentioned claimed limitations are taught by Hwang'963. In particular, Kniseley'877 teaches wherein the logical channel is a dedicated traffic channel (DTCH) for transmitting the PDU (see FIG. 3, DTCH is utilized to transmits PDU; col. 4, lines 3-21; see col. 6, lines 40-65).

In view of this, having the combined system of APA and Rathonyi'877, then given the teaching of Hwang'963, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of APA and Rathonyi'877, by providing an DTCH channel for transmitting PDU, as taught by Hwang'963. The motivation to combine is to obtain the advantages/benefits taught by Hwang'963 since Hwang'963 states at col. 2, lines 5-15 that such modification would provide effective implementation of a medium access control layer since the medium access control layer formats the PDU according to channel characteristics.

Regarding claim 10, the combined system of APA and Rathonyi'877 wherein the logical channel for transmitting the RLC-PDU and the HARQ-RLC-Control-PDU as described above in claim 1.

Neither APA nor Rathonyi'877 explicitly discloses a dedicated control channel (DCCH).

However, the above-mentioned claimed limitations are taught by Hwang'963. In particular, Kniseley'877 teaches wherein the logical channel is a dedicated control channel (DCCH) for transmitting the PDU (see FIG. 3, DCCH is utilized to transmit PDU; col. 3, lines 65 to col. 4, lines 2; see col. 5, lines 41-50; see col. 6, lines 40-50).

In view of this, having the combined system of APA and Rathonyi'877, then given the teaching of Hwang'963, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of APA and Rathonyi'877, by providing an DCCH channel for transmitting PDU, as taught by Hwang'963. The motivation to combine is to obtain the advantages/benefits taught by Hwang'963 since Hwang'963 states at col. 2, lines 5-15 that such modification would provide effective implementation of a medium access control layer since the medium access control layer formats the PDU according to channel characteristics.

Regarding claim 11, the combined system of APA and Rathonyi'877 wherein the transport channel for transmitting the RLC-PDU and the HARQ-RLC-Control-PDU as described above in claim 1.

Neither APA nor Rathonyi'877 explicitly discloses a dedicated channel (DCH).

However, the above-mentioned claimed limitations are taught by Hwang'963. In particular, Kniseley'877 teaches wherein the transport channel is a dedicated channel (DCH) for transmitting the PDU (see FIG. 3, DCH is utilized to transmit PDU; see col. 5, lines 41-50; see col. 6, lines 40-50).

In view of this, having the combined system of APA and Rathonyi'877, then given the teaching of Hwang'963, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of APA and Rathonyi'877, by providing an DCH channel for transmitting PDU, as taught by Hwang'963. The motivation to combine is to obtain the advantages/benefits taught by Hwang'963 since Hwang'963 states at col. 2, lines 5-15 that such modification would provide effective implementation of a medium access control layer since the medium access control layer formats the PDU according to channel characteristics.

Regarding claim 12, the combined system of APA and Rathonyi'877 wherein the physical channel for transmitting the RLC-PDU and the HARQ-RLC-Control-PDU as described above in claim 1.

Neither APA nor Rathonyi'877 explicitly discloses a dedicated physical channel (DPCH).

However, the above-mentioned claimed limitations are taught by Hwang'963. In particular, Kniseley'877 teaches wherein the physical channel is a dedicated

physical channel (DPCH) for transmitting the PDU (see FIG. 3, DPCH channel (i.e. DPDCH and DPCCH) is utilized to transmit PDU; see col. 6, lines 52-65).

In view of this, having the combined system of APA and Rathonyi'877, then given the teaching of Hwang'963, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of APA and Rathonyi'877, by providing an DPCH channels for transmitting PDU, as taught by Hwang'963. The motivation to combine is to obtain the advantages/benefits taught by Hwang'963 since Hwang'963 states at col. 2, lines 5-15 that such modification would provide effective implementation of a medium access control layer since the medium access control layer formats the PDU according to channel characteristics.

Allowable Subject Matter

8. Claims 3,4, 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. Claims 7 are objected as being depended upon on objected claim as described section 3.
10. Claim 5-8 and 17 would be allowable if rewritten to overcome the objection(s) set forth in this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 571-272-3085. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

INM
9/23/04

BRIAN NGUYEN
PRIMARY EXAMINER